

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/002235

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H01Q9/04 H01Q1/24

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H01Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 932 219 A (LK PRODUCTS OY) 28 July 1999 (1999-07-28) figures 6,7 paragraphs '0012! - '0016!	1,4,6,7, 10,12
Y		2,5,8,11
X	WO 01/24311 A (ALLGON AB ; BARTHA ISTVAN (SE); NILSSON FELIX (SE); SUNDBERG DANIEL (S) 5 April 2001 (2001-04-05) page 4, line 4 - page 6, line 11 figures 1-4	1,4,6,7, 10,12
Y		2,5,8,11
	----- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*&\* document member of the same patent family

Date of the actual completion of the international search

30 August 2004

Date of mailing of the international search report

06/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Kruck, P

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/002235

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2003/103010 A1 (BOYLE KEVIN R) 5 June 2003 (2003-06-05) paragraphs '0042!, '0044!, '0045! figure 9	2,5,8,11
A		1,3,4,6, 7,9,10, 12
A	----- WO 02/080304 A (ALLGON MOBILE COMM AB ; MOREN STEFAN (SE); TRI NGUYEN MINH (SE)) 10 October 2002 (2002-10-10) page 6, line 18 - page 7, line 26 figures 1,2	1-12
A	----- EP 0 867 967 A (NOKIA MOBILE PHONES LTD) 30 September 1998 (1998-09-30) column 8, line 24 - line 48 figure 4 -----	1-12

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/002235

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0932219	A	28-07-1999	FI	980131 A	22-07-1999
			EP	0932219 A2	28-07-1999
WO 0124311	A	05-04-2001	AU	7820600 A	30-04-2001
			WO	0124311 A1	05-04-2001
			SE	9903482 A	28-03-2001
US 2003103010	A1	05-06-2003	WO	03047025 A1	05-06-2003
WO 02080304	A	10-10-2002	CN	1476651 T	18-02-2004
			EP	1374335 A1	02-01-2004
			SE	0101172 A	03-10-2002
			WO	02080304 A1	10-10-2002
			US	2004051673 A1	18-03-2004
EP 0867967	A	30-09-1998	FI	971307 A	28-09-1998
			DE	69813357 D1	22-05-2003
			DE	69813357 T2	26-02-2004
			EP	1329982 A1	23-07-2003
			EP	0867967 A2	30-09-1998
			US	5914690 A	22-06-1999